

4. The apparatus as recited in claim 3 wherein the micro-porous panel characteristics comprise thickness of the micro-porous panel, pore diameter, pore density, and air gap size.

5. The apparatus as recited in claim 2 wherein the actuator comprises a piezoelectric actuator.

6. The apparatus as recited in claim 3 wherein the optimal blade number is between 20 and 27.

7. The apparatus as recited in claim 1 wherein the optimal blade number is 25.

8. The apparatus as recited in claim 1 wherein the micro-porous panel comprises a top cover for the blower housing.

9. A method, comprising:

providing a blower housing;

providing a cooling fan within the housing;

providing a micro-porous panel covering at least part of the blower housing;

providing an air gap beneath the micro-porous panel.

10. The method as recited in claim 9, further comprising: dynamically adjusting the size of the air gap to maximize sound attenuation as the fan operates at different speeds.

11. The method as recited in claim 10 wherein the air gap is dynamically adjusted with an actuator.

12. The method as recited in claim 10 wherein the actuator comprises a piezoelectric actuator.

13. The method as recited in claim further comprising:

determining an optimum number of blades for the fan and an associated band-pass frequency; and

selecting the micro-porous panel characteristics are based on the band pass frequency

14. The method as recited in claim 13 wherein the optimum number of blades is 25.

15. The method as recited in claim 13 wherein the micro-porous panel characteristics comprise thickness of the micro-porous panel, pore diameter, pore density, and air gap size.

16. A system for cooling a thin form factor computing device, comprising:

a blower comprising a blower housing in the computing device,

a cooling fan in the blower housing;

a micro-porous panel covering at least part of the blower housing; and

an air gap beneath the micro-porous panel.

17. The system as recited in claim 16 further comprising: an actuator to dynamically adjust the size of the air gap beneath the micro-porous panel.

18. The system as recited in claim 16 wherein the cooling fan further comprises:

an optimal number of blades having a band pass frequency associated therewith; and

wherein the micro-porous panel characteristics are chosen based on the band pass frequency.

19. The system as recited in claim 17 wherein the actuator comprises a piezoelectric actuator.

20. The system as recited in claim 17 wherein the micro-porous panel comprises a top cover for the blower housing.

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